Amendments to the Claims:

Please cancel claims 1-20 as presented in the underlying International Application No. PCT/EP2005/000122.

Please add new claims 21-44 as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-20 (canceled)

Claim 21 (new): A method for controlling a cooking process on a cooktop including: a cooktop plate having, in a direction perpendicular to the main directions of extension of the upper and lower surfaces, a material thickness defined by a flat upper surface and a flat lower surface; at least one cooking zone heatable by a heating device disposed beneath the cooktop plate when the cooktop is in an installed position; and a first and a second heat sensor unit disposed beneath the cooktop plate; the method comprising:

measuring, by the first heat sensor unit, a first heat flow emanating downward substantially from the cooktop plate in an area of a first cooking zone of the at least one cooking zone;

measuring, by the second heat sensor unit, a second heat flow emanating downward, in the area of the first cooking zone, downward substantially from the cooktop plate and a cooking utensil disposed thereon;

calculating, by an electrical control system, a comparison value from respective output signals of the first and second heat sensor units;

comparing, by the electrical control system, the calculated comparison value with at least one predetermined and stored reference value; and

controlling, by the electrical control system, a heat output of the heating device as a function of the comparing.

Claim 22 (new): The method as recited in claim 21 wherein the cooktop plate includes a glass ceramic material.

Claim 23 (new): The method as recited in claim 21 wherein the first and second heat sensor units detect thermal radiation as a part of the respective heat flows.

Claim 24 (new): The method as recited in claim 21 further comprising determining, using a third heat sensor, an emissivity of a bottom of the cooking utensil so as to control a cooking process.

Claim 25 (new): A cooktop comprising:

a cooktop plate having, in a direction perpendicular to the main directions of extension of the upper and lower surfaces, a material thickness defined by a flat upper surface and a flat lower surface;

at least one cooking zone heatable by a heating device disposed beneath the cooktop plate when the cooktop is in an installed position;

a first heat sensor unit disposed beneath the cooktop plate and configured to measure a first heat flow emanating downward substantially from the cooktop plate in an area of a first cooking zone of the at least one cooking zone;

a second heat sensor unit disposed beneath the cooktop plate and configured to measure a heat flow emanating downward substantially from the cooktop plate and a cooking utensil disposed thereon in the area of the first cooking zone; and

an electrical control system including a processing unit and a memory, the processing unit being configured to generate a comparison value from respective output signals of the first and second heat sensor units, the electrical control system being configured to control a heat output of the heating device as a function of a comparison of the comparison value with at least one predetermined reference value stored in the memory.

Claim 26 (new): The cooktop as recited in claim 25 wherein the cooktop plate includes a glass ceramic material.

Claim 27 (new): The cooktop as recited in claim 25 wherein the electrical control system is configured to control the heat output of the heating device as a function of the respective output signal of the first heat sensor unit.

Claim 28 (new): The cooktop as recited in claim 25 wherein the first heat sensor unit includes a contact temperature sensor.

Claim 29 (new): The cooktop as recited in claim 25 wherein:

a first measuring range of the first heat sensor unit is limited to measurement of thermal radiation in a first wavelength range; and

in the area of the first cooking zone, at least in a first sensing region of the first heat sensor unit, the cooktop plate has a transmittance of less than 20 % for thermal radiation of the first wavelength range.

Claim 30 (new): The cooktop as recited in claim 29 wherein, at least in the first sensing region of the first heat sensor unit, the transmittance of the cooktop plate for thermal radiation of the first wavelength range is approximately 0 %.

Claim 31 (new): The cooktop as recited in claim 29 wherein:

a second measuring range of the second heat sensor unit is limited to measurement of thermal radiation in a second wavelength range, the second wavelength range being different from the first wavelength range; and

in the area of the first cooking zone, at least in a second sensing region of the second heat sensor unit, the cooktop plate has a transmittance greater than 20 % for thermal radiation of the second wavelength range.

Claim 32 (new): The cooktop as recited in claim 31 wherein, at least in the second sensing region of the second heat sensor unit, the transmittance of the cooktop plate for thermal radiation of the second wavelength range is at least about 50 %.

Claim 33 (new): The cooktop as recited in claim 29 wherein the first and second heat sensor units are configured to measure thermal radiation and have at least one component in common.

Claim 34 (new): The cooktop as recited in claim 33 wherein the first and second heat sensor units have a shared heat sensor.

Claim 35 (new): The cooktop as recited in claim 25 wherein the material thickness of the cooktop plate is reduced at least in a sensing region of the second heat sensor unit.

Claim 36 (new): The cooktop as recited in claim 35 wherein, at least in the sensing region of the second heat sensor unit, the cooktop plate includes a converging lens configured to direct thermal radiation in a direction from the cooktop plate toward the second heat sensor unit.

Claim 37 (new): The cooktop as recited in claim 25 further comprising at least one deflector device disposed in an optical path from at least one of the cooktop plate and a bottom of the cooking utensil to the at least one of the first and the second heat sensor units.

Claim 38 (new): The cooktop as recited in claim 25 further comprising an optical filter disposed in an optical path from at least one of the cooktop plate and a bottom of the cooking utensil to the second heat sensor unit, the optical filter including a same material as the material of the cooktop plate.

Claim 39 (new): The cooktop as recited in claim 25 wherein the second heat sensor unit is configured to measure an emissivity of a bottom of the cooking utensil.

Claim 40 (new): The cooktop as recited in claim 25 wherein a second measuring range of the second heat sensor unit is limited to measurement of thermal radiation in a second wavelength range, and further comprising a third heat sensor unit having a third measuring range limited to thermal radiation in a third wavelength range, the third wavelength range being different from the second wavelength range, wherein, in the area of the first cooking zone, at least in a third sensing region of the third heat sensor unit, the cooktop plate has a transmittance greater than 30 % for thermal radiation of the third wavelength range.

Claim 41 (new): The cooktop as recited in claim 25 further comprising a coating disposed on the upper surface of the cooktop plate in a sensing region of the first heat sensor unit, the coating having a transmittance of approximately 0 %.

Claim 42 (new): The cooktop as recited in claim 41 wherein the coating has a reflectance of about 100 %.

Claim 43 (new): The cooktop as recited in claim 41 wherein the coating has an absorptance of about 100 %.

Claim 44 (new): A system comprising: a cooktop and a cooking utensil disposed thereon, the cooktop including:

a cooktop plate having, in a direction perpendicular to the main directions of extension of the upper and lower surfaces, a material thickness defined by a flat upper surface and a flat lower surface;

at least one cooking zone heatable by a heating device disposed beneath the cooktop plate when the cooktop is in an installed position;

a first heat sensor unit disposed beneath the cooktop plate and configured to measure a first heat flow emanating downward substantially from the cooktop plate in an area of a first cooking zone of the at least one cooking zone;

a second heat sensor unit disposed beneath the cooktop plate and configured to measure a heat flow emanating downward substantially from the cooktop plate and the cooking utensil, the cooking utensil being disposed in the area of the first cooking zone;

an electrical control system including a processing unit and a memory, the processing unit being configured to generate a comparison value from respective output signals of the first and second heat sensor units, the electrical control system being configured to control a heat output of the heating device as a function of a comparison of the comparison value with at least one predetermined reference value stored in the memory; and

a coating disposed on a bottom of the cooking utensil, at least in an area that overlaps a sensing region of the second heat sensor unit, the coating having a predetermined emissivity;

wherein the memory of the electrical control system is configured to store the predetermined emissivity.